

## Message

**From:** Marc Edwards [edwardsm@vt.edu]  
**Sent:** 1/11/2017 2:20:11 PM  
**To:** Kaplan, Robert [kaplan.robert@epa.gov]; Deltoral, Miguel [deltoral.miguel@epa.gov]; Durno, Mark [durno.mark@epa.gov]  
**Subject:** This is where it started.  
**Attachments:** Wayne state meeting.pptm

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**From:** Marc Edwards [mailto:edwardsm@vt.edu]  
**Sent:** Wednesday, January 11, 2017 8:52 AM  
**To:** 'Andy Leavitt' <leavitt.andrew@gmail.com>  
**Subject:** This is where it started.

## Water filters could increase bacteria in Flint water, researchers say



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Water Study Update and Open House, Dec. 14

The Flint Journal

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on December 14, 2016 at 11:29 PM, updated December 15, 2016 at 12:34 AM

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FLINT, MI - While the point-of-use water filters provided by the state clear lead from Flint drinking water, they actually have the potential to increase bacteria levels in the water, researchers say.

However, researchers weren't willing to say the potential bacteria posed a health risk to Flint water customers.

Based on a sample of 16 homes tested this fall, researchers from the Flint Area Community Health and Environment Partnership (FACHEP) found that while the filters effectively get lead and dangerous disinfectant byproducts out of the water, by design, they also provide an environment for bacteria to grow.

The researchers presented their findings from a study tracking Legionellosis cases and chlorine levels in Flint water and outside the county during a Wednesday, Dec. 14, panel open to the community at the Flint Public Library.

The discussion, which included an explanation on the researchers' progress in their study of Legionellosis, comes a year after Michigan health officials told Flint residents to stop drinking the tap water.

State officials are continuing to provide city residents with water filters as residents are being told the water is not safe to drink unless properly filtered.

"This is based on total bacteria, it says nothing about who they are, or if they're pathogenic or not," said Dr. Nancy Love, a member of the research group and professor of civil and environmental engineering at the University of Michigan.

"We know that drinking water contains completely harmless bacteria, but we want to understand a bit more about who these bacteria are."

Love said that to better the quality of the water, it's important to let water run through the filter for at least one minute to let the bacteria that has built up in the activated carbon filter disperse. Other tactics for clearing the bacteria from the water include boiling water or using a UV disinfection lamp.

Although it could help reduce bacteria, flushing the filter for extended periods of time also decreases the life of the filter and its ability to remove lead, said Love.

Dr. Shawn McElmurry, a Wayne State University professor also on the FACHEP team, noted that in cases of concern, bottled water is always a safe alternative. Because filters are designed to capture and absorb organic matter, he said, they naturally hold onto the organic organisms that are bacteria.

The partnership is a team of researchers headed by Wayne State University evaluating links between changes in Flint's water system and public health, particularly the city's deadly Legionnaires Disease outbreak.

"It was nice to hear that things aren't all better, because that's what we're used to hearing --- that things are better, that things are all fine," said Flint resident and water crisis activist Melissa Mays. "There's certainly been a concern about the filters and we've definitely heard that they can grow bacteria. I can only imagine what would happen if I were to try to drink this through the tap filters. It's telling me I'm making the right decision by drinking bottled water. I'm not taking the risk, I'm not putting my kids through that again."

Joyce Sanders of Flint, also attended the open house with her husband and two daughters.

"It was a confirmation of something I had suspected," Sanders said, referring to increased bacteria levels in the water.

"It was something that I'd heard about, but I didn't really have the nuts and bolts about why it would be there. But now I know that it's related to the filter and the cleansing process that the water goes through."

Sanders said that she recently had to cut her daughters' hair after their stylist told her the girls had bacterial infections in their hair.

"I don't even shampoo their hair now," Sanders said. "I take them to a salon in Flint Township because I don't feel comfortable washing their hair in the water."

**McElmurry said it's important that Flint residents know "that there are people out there working to understand the concerns that residents have."**

"Flint residents have become extremely resourceful -- they've been dealing with this for a long time -- and it's because of them that we're able to do our work," said McElmurry. "I think that there are certainly signs the system is improving, but it's too sporadic, and these things just need to be resolved."

FACHEP will host another update and open house in the springtime.